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APPEAL BRIEF

Appellant	: Shigeru Nemoto
App. No	: 10/692,090
Filed	: October 23, 2003
For	: SYRINGE BARREL WITH ROUGHENED SURFACE
Examiner	: Desanto, Matthew F.
Art Unit	: 3763

Mail Stop Appeal Brief-Patents

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

In accordance with the Notice of Appeal filed, Appellant submits this Appeal Brief.

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I. REAL PARTY IN INTEREST

Pursuant to 37 C.F.R. §1.192, Appellant hereby notifies the Board of Patent Appeals and Interferences that the real party in interest is Nemoto Kyorindo Co., Ltd., which is the assignee of the present application, the assignment for which is recorded in connection with U.S. Patent Application No. 09/780731, which is the parent application to the present application.

II. RELATED APPEALS AND INTERFERENCES

Appellants are unaware of any related appeals or interferences.

III. STATUS OF CLAIMS

The above-identified application was filed on October 23, 2003, with 9 claims. During a telephone conversation with the Examiner on January 19, 2005 a provisional election was made without traverse to prosecute Claims 1-4 and 9. Claims 1-4 and 9 were rejected in an Office Action dated January 26, 2005. In response to this Office Action, Appellant filed an amendment on June 27, 2005, amending Claim 9, canceling the withdrawn Claims 5-8 and adding new Claims 10-13. Claim 1-4 and 9-13 were rejected in a Final Office Action dated September 22, 2005. In response to the final rejection, Appellants filed an RCE and response on March 21, 2006, in which Claim 1 was amended and Claim 11 was canceled. Claims 1-4, 9, 10, 12 and 13 were rejected in an Office Action dated May 19, 2006. In response to this Office Action, Appellants filed an amendment on November 20, 2006, further amending Claims 1, 3, 9, 10, 12 and 13 and canceling Claims 2 and 4. Claims 1, 3, 9, 10, 12 and 13 were rejected by the Examiner in an Office Action dated February 27, 2007. In response to this Office Action, Appellant filed a Response dated August 27, 2007 without any claim amendments. Claims 1, 3, 9, 10, 12 and 13 were finally rejected in a Final Office Action dated November 19, 2007. In response to the Final Office Action, Appellant filed an RCE and response on May 15, 2008 in which Claim 1 was further amended. The Examiner rejected Claims 1, 3, 9, 10, 12 and 13 in an Office Action dated July 01, 2008. In response Appellant filed an Amendment and response dated December 19, 2008 wherein Claim 1 was further amended, Claims 10, 12 and 13 were canceled and new Claim 14 was added. Claims 1, 3, 9 and 14 were finally rejected in a Final Office Action dated April 03, 2009. In response to the Final Office Action dated April 03, 2009,

Appellant filed a Notice of Appeal on July 02, 2009. Claims 1, 3, 9 and 14 are currently pending and are the subject of the Appeal Brief.

IV. STATUS OF AMENDMENTS

No amendments have been filed subsequent to the pending final Office Action.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Appellant's invention relates to an improvement in an injection apparatus that is suitable for injection at high injection pressure. The injection apparatus disclosed in this application provides numerous advantages such as resistance to breakage of the syringe or displacement of the flange at high injection pressures and speeds. Appellant has unexpectedly discovered that an injection apparatus having a random roughness pattern on the surface of the flange insertion groove that contacts the front surface of the flange or the front surface or rear surface of the flange are effective in preventing breakage or displacement of the flange at high injection speeds and pressures. In contrast conventional injection apparatus without any roughened surfaces exhibit breakage and/or displacement of the flange at lesser injection speeds and pressures.

Claim 1 is the sole independent claim in this appeal. The subject matter of this claim relates to an injection apparatus, comprising a cylinder holder that comprises a flange insertion groove having a first surface and a second surface; and a syringe barrel, comprising a flange adapted to be held by said flange insertion groove so as to fix the syringe barrel, said flange having a front surface and a rear surface, wherein said first surface of the flange insertion groove contacts the front surface of the flange and the second surface of the flange insertion groove contacts the rear surface of the flange, wherein at least one of the front surface, the rear surface of the flange, the first surface of the flange insertion groove, and the second surface of the flange insertion groove has a random roughness pattern, and wherein the cross section of the roughened surface has a roughness equivalent to that of about No. 20 to 1500 as expressed in terms of count of sand paper.

Each limitation of the independent claim is supported by the specification as filed as follows:

CLAIM NO.	LIMITATION	SUPPORT
1	An injection apparatus, comprising: a cylinder holder that comprises a flange insertion groove having a first surface and a second surface; and	Figs. 1 and 2(a)-2(c) and Page 12, lines 4-14
1	a syringe barrel, comprising a flange adapted to be held by said flange insertion groove so as to fix the syringe barrel, said flange having a front surface and a rear surface,	Figs. 1 and 2(a)-2(c) and Page 12, lines 4-14
1	wherein said first surface of the flange insertion groove contacts the front surface of the flange and the second surface of the flange insertion groove contacts the rear surface of the flange,	Fig. 39 and Page 24, lines 10-11
1	wherein at least one of the front surface, the rear surface of the flange, the first surface of the flange insertion groove, and the second surface of the flange insertion groove has a random roughness pattern,	Page 23, lines 26-30; Page 24, lines 10-17; Page 24, lines 22-23
1	and wherein the cross section of the roughened surface has a roughness equivalent to that of about No. 20 to 1500 as expressed in terms of count of sand paper.	Page 24, lines 18-23
3	The injection apparatus according to Claim 1, wherein the front surface of the flange is roughened.	Page 23, lines 27-28
9	An injection apparatus according to Claim 1 or Claim 3, further comprising: a syringe comprising said syringe barrel; and a chemical solution filled in the syringe.	Page 26, lines 1-10
14	The injection apparatus of Claim 1, wherein the first surface of the flange insertion groove has the random roughness pattern.	Page 24, lines 10-17

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The Examiner has rejected Claims 1, 3, 9, and 14 under 35 U.S.C. §103(a) as allegedly being unpatentable over Botich et al. (US Patent No. 5,407,431) in view of Ericson et al. (US Publication No. 2001/0014996), and Skakoon et al. (US Patent No. 4,804,368).

VII. ARGUMENT

Botich et al. in view of Ericson and Skakoon (Claims 1, 3, 9, and 14)

In the Final Office Action mailed April 03, 2009, the Examiner alleges that Botich et al., Ericson et al. and Skakoon et al. each disclose some limitation of the present claims. The Examiner therefore contends that at the time of the invention, it would have been obvious to combine the teachings of Botich et al. with Ericson et al. and Skakoon et al. to realize the injection apparatus recited by Claim 1.

a. No *prima facie* showing of obviousness

As noted in the Appellant's response filed on December 19, 2008, present Claim 1 recites:

*An injection apparatus, comprising:
a cylinder holder that comprises a flange insertion groove having a first surface and a second surface; and
a syringe barrel, comprising a flange adapted to be held by said flange insertion groove so as to fix the syringe barrel, said flange having a front surface and a rear surface,
wherein said first surface of the flange insertion groove contacts the front surface of the flange and the second surface of the flange insertion groove contacts the rear surface of the flange, wherein at least one of the front surface, the rear surface of the flange, the first surface of the flange insertion groove, and the second surface of the flange insertion groove has a random roughness pattern, and wherein the cross section of the roughened surface has a roughness equivalent to that of about No. 20 to 1500 as expressed in terms of count of sand paper.*

The Examiner alleges that Botich et al. discloses a pre-filled syringe barrel comprising a flange that has a front and rear surface, wherein the front surface is roughened "to provide greater coefficient of friction." However, as noted by the Examiner Botich et al. fails to disclose that the "cross section of the roughened surface has a roughness of about No. 20 to 1500 as expressed in terms of count of sand paper" and "wherein at least one of the front and rear surface is randomly roughened," as recited by Claim 1 or "wherein the first surface of the flange insertion groove has the random roughness pattern," as recited by Claim 14. Furthermore, as recognized by the Office Action, the grooves disclosed in Botich et al. have a regular pattern. Thus, Botich et al. fails to disclose "at least one of the front surface, and the rear surface of the flange, the first surface of

the flange insertion groove, and the second surface of the flange insertion groove has a random roughness pattern” as recited by Claim 1 or “wherein the first surface of the flange insertion groove has the random roughness pattern,” as recited by Claim 14.

Additionally, Appellant submits that Botich et al. does not disclose a “a cylinder holder that comprises a flange insertion groove having a first surface and a second surface; and a syringe barrel, comprising a flange adapted to be held by said flange insertion groove so as to fix the syringe barrel, said flange having a front surface and a rear surface,” as recited by Claim 1. The Examiner cites Skakoon et al. which discloses in col. 5:33-35 a syringe holder that advantageously permits the utilization of a wide variety of disposable syringes from various syringe manufacturers. To the extent that Skakoon et al. discloses “a cylinder holder that comprises a flange insertion groove having a first surface and a second surface; and a syringe barrel, comprising a flange adapted to be held by said flange insertion groove so as to fix the syringe barrel, said flange having a front surface and a rear surface,” Skakoon et al. does not disclose “at least one of the front surface, the rear surface of the flange, the first surface of the flange insertion groove, and the second surface of the flange insertion groove has a random roughness pattern, and wherein the cross section of the roughened surface has a roughness equivalent to that of about No. 20 to 1500 as expressed in terms of count of sand paper,” as recited by Claim 1. In fact, Skakoon et al. does not disclose that any of surfaces of the syringe or the syringe holder are roughened.

The Examiner further alleges that Ericson et al. discloses a wedge clamp type termination for elevator tension member, but more importantly Ericson et al. teaches using sandblasting to raise the coefficient of friction of a surface. The Examiner further contends that Ericson et al. further teaches other methods of increasing the surface friction which include etching, machining, knurling and other suitable equivalents. However, Ericson et al. does not disclose a syringe or an injection apparatus comprising a cylinder holder and a syringe barrel.

On page 6 of the final Office Action dated April 03, 2009, the Examiner states that the rejection is maintained “because of the fact that it is well known to use sandblasting as a way to increase friction, and if we used sandblasting to as an alternative to forming ridges on the flange of the syringe, the modified device would be the same as the claimed invention.”

Appellant submits that the provided reasons to make the asserted modification of Botich et al. are insufficient to establish a *prima facie* case of obviousness. While, it may very well be true that sandblasting can be used to increase friction in general, the Examiner has cited no reason at all to use sandblasting to increase friction to the specific range of “roughness of about No. 20 to 1500 as expressed in terms of count of sand paper” that is recited in Appellants’ claims.

The Supreme Court has made clear that the Examiner must establish a reason that one of skill in the art would have combined the elements of the cited references, and that such reason must be more than a conclusory statement that it would have been obvious.

Often, it will be necessary for a court to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine *whether there was an apparent reason to combine the known elements in the fashion claimed* by the patent at issue. To facilitate review, this analysis should be made explicit. *See In re Kahn*, 441 F.3d 977, 988 (CA Fed. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”).

KSR Int’l Co. v. Teleflex Inc., 550 U.S. 398, 127 S. Ct. 1727, 1740-41, 82 U.S.P.Q.2d 1385 (2007) (emphasis added).

As noted by the Examiner, Botich et al. discloses with reference to Figs. 1 – 6 and in col. 11:18-23 that grooves 83 or knurling may be etched within the finger-retaining lips or upon the pushing plate 77 to provide a greater coefficient of friction between the fingers and thumb and the finger retaining lip 79 and pushing plate 77, respectively. However, nothing in Botich et al. suggests that the roughness of the pushing plate should be adjusted to the specific recited range of “roughness of about No. 20 to 1500 as expressed in terms of count of sand paper.”

Appellant submits that one skilled in the art when presented with Botich et al. would have no reason at all to use sandblasting or any other technique as an alternative to forming the grooves or knurling to produce the specific recited range of roughness since nothing in any of the cited references suggests that the specific range of roughness of a surface is any more advantageous than any other range of roughness, or by the knurling which is also disclosed by Eriscon et al. as a method of increasing surface friction.

Accordingly, Appellant submits that contrary to the assertion in the Office Action, it is not obvious that one skilled in the art would modify the syringe disclosed by Botich et al. in view of Ericson et al. and Skakoon et al. to produce the specific range of roughness recited in Appellants' claims.

b. Unexpected Results

Moreover, even if the combination of references would create a *prima facie* showing of obviousness, the random roughness pattern recited in Claim 1 would lead to unexpected results that provide strong evidence of non-obviousness in rebuttal to any such showing, as set forth in the response dated December 19, 2008 and further discussed below. The Examiner has disregarded this evidence because the Examiner believes this property was possessed by the prior art. However, as discussed below, the Appellants have already provided specific evidence that that the properties obtained by the random roughness pattern within the specific recited range were not possessed by the prior art.

M.P.E.P. § 716.02(a) I states: "A greater than expected result is an evidentiary factor pertinent to the legal conclusion of obviousness ... of the claims at issue. In re Corkill, 711 F.2d 1496, 226 USPQ 1005 (Fed. Cir. 1985)." In fact, M.P.E.P. § 716.02(a) II states: "Evidence of unobvious or unexpected advantageous properties, such as superiority in a property the claimed compound shares with the prior art, can rebut *prima facie* obviousness." Thus, even if the references cited did lead to a *prima facie* case of obviousness, the unexpected results discussed below would effectively rebut such a showing.

Table 1 of the specification as filed on page 27 shows the results of a pressure-resistance test conducted on an injection apparatus having a random roughness pattern on the first surface of the flange insertion groove that contacts the front surface of the flange according to the recited claims. As evidenced by Table 1, the injection apparatus did not show any breakage of the syringe or displacement of the flange even at high injection speeds of 6 mL/sec and pressures of about 2.83 - 2.87 MPa.

In addition, page 23, lines 26-30 establish that roughening of a front surface or rear surface of the flange is also effective to prevent breakage.

In contrast as shown in Table 2 on page 28, all the examples of an injection apparatus without any roughened surface showed breakage and/or displacement of the flange at lesser injection speeds and pressures.

As stated in M.P.E.P. § 2145 “Rebuttal evidence may also include evidence that the claimed invention yields unexpectedly improved properties or properties not present in the prior art. Rebuttal evidence may consist of a showing that the claimed compound possesses unexpected properties. Dillon, 919 F.2d at 692-93, 16 USPQ2d at 1901. A showing of unexpected results must be based on evidence, not argument or speculation.”

In the present case, the ability to prevent breakage of the syringe when discharging liquid from a syringe or introducing liquid into a syringe is a significant unexpected result which is shown by evidence in Table 1 and Table 2. Botich et al. does not suggest that an injection apparatus having a roughness pattern could increase resistance to breakage. In fact, the grooves 83 on the front surface of the flange 79 disclosed in Botich et al. are configured to provide greater coefficient of friction between the fingers and thumb and the finger retaining lip and pushing plate respectively and not for providing resistance to breakage of the syringe. See for example, column 11, lines 17-24 of Botich et al. Moreover, as explained in the expert Declaration of Mr. Akio Yazawa dated May 9, 2008 which was submitted along with the response dated May 15, 2008 (“Yazawa Declaration”), the grooves on the syringe barrel disclosed by Botich et al. would not provide any benefit in preventing breakage of the syringe when used with a cylinder holder with flange insertion groove and if the syringe barrel disclosed by Botich et al. or that having a similar structure were tested in the manner described in the present application, results similar to that obtained for the comparative examples having no roughened surfaces would be obtained.

There simply would be no basis for the grooves of Botich et al. to prevent breakage because the grooves are designed to provide friction between the user’s fingers and the syringe. As described in Paragraph 4 of the Yazawa Declaration, the grooves of Botich do not affect the coefficient of friction. It is the increased coefficient of friction which leads to the improved resistance to breakage observed in connection with the claimed invention. Nothing in the cited prior art or anything else in the knowledge of those having ordinary skill in the art would lead such a person to expect that breakage resistance could be improved when a random roughness pattern having a roughness within the recited range were provided. Accordingly, the results presented by Appellants truly are unexpected. As such, these results are strong evidence of nonobviousness, which would rebut any *prima facie* showing of obviousness that may be present.

On page 6 of the Office Action dated April 3, 2009, the Examiner states:

The examiner understands that the random roughening provides an extra benefit of providing strength but this is a "new" and unexpected characteristic of known structural limitations, the fact that the applicant has recognized another advantage which would flow naturally from following the suggestion of prior art cannot be the basis for patentability when the differences would otherwise be obvious. See Ex parte Obiaya, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

However, in the present case, the advantages do not "flow naturally from following the suggestion of prior art." The rule of *Ex parte Obiaya* relied upon by the Examiner appears in M.P.E.P. § 2145(II)(A). This section makes clear that "mere recognition of latent properties in the prior art does not render nonobvious an otherwise known invention." The section explains that "granting a patent on the discovery of an unknown but inherent function . . . 'would remove from the public that which is in the public domain.'" Thus, in order for an advantage to "flow naturally from following the suggestion of prior art," that advantage must be a latent property that is inherently present, but unknown, in the prior art.

Here, the unexpected advantage is that resistance to breakage is improved by providing the recited amount of roughness on at least one surface of a syringe barrel and cylinder holder. Such an advantage could not have been inherently present in the prior art, because the advantage only results when the combination has been made. Since the recited combination has not been shown to ever have been made, the advantage could not have been inherently possessed by the prior art uncombined elements. In other words, the unexpected results achieved by the injection apparatus recited by the present claims are not a case of merely recognizing additional advantages already present in the prior art since preventing breakage and/or displacement of the flange at high injection speeds and pressures is not disclosed or even remotely suggested in any of the cited references. Instead the unexpected results are achieved only in those injection apparatus that include all the features recited in Claim 1. Thus, contrary to the Examiner's position, the results reported by Appellants truly are unexpected. These unexpected results strongly support the non-obviousness of the present invention, and would effectively rebut any allegation of *prima facie* obviousness.

Appellant additionally submits that the presently claimed invention relates to an injection apparatus that is resistant to breakage of a syringe barrel and/or displacement of the flange under

high injection speeds and pressures. Such an injection apparatus can be used for automatic injection of a chemical solution having high viscosity such as a contrast agent for X ray, CT imaging and MRI that require high pressure so as to make the injection process less labor intensive.

None of the cited references disclose or even remotely suggest that an injection apparatus having a random roughness pattern on the front surface of the flange, the rear surface of the flange, the first surface of the flange insertion groove, and the second surface of the flange insertion groove would be expected to be effective in preventing breakage and/or displacement of the flange at high injection speeds and pressures. The Examiner has pointed to nothing else within the knowledge of those having ordinary skill in the art that would lead to such an expectation. Accordingly, the unexpectedness of the results would rebut any *prima facie* showing of obviousness based on the cited combination of references.

VIII. CLAIMS APPENDIX

1. An injection apparatus, comprising:
a cylinder holder that comprises a flange insertion groove having a first surface and a second surface; and
a syringe barrel, comprising a flange adapted to be held by said flange insertion groove so as to fix the syringe barrel, said flange having a front surface and a rear surface,
wherein said first surface of the flange insertion groove contacts the front surface of the flange and the second surface of the flange insertion groove contacts the rear surface of the flange, wherein at least one of the front surface, the rear surface of the flange, the first surface of the flange insertion groove, and the second surface of the flange insertion groove has a random roughness pattern, and wherein the cross section of the roughened surface has a roughness equivalent to that of about No. 20 to 1500 as expressed in terms of count of sand paper.
2. **(Canceled)**
3. The injection apparatus according to Claim 1, wherein the front surface of the flange is roughened.
- 4-8. **(Canceled)**
9. An injection apparatus according to Claim 1 or Claim 3, further comprising:
a syringe comprising said syringe barrel; and
a chemical solution filled in the syringe.
10. **(Cancelled)**
11. **(Cancelled)**
12. **(Cancelled)**
13. **(Cancelled)**
14. The injection apparatus of Claim 1, wherein the first surface of the flange insertion groove has the random roughness pattern.

IX. EVIDENCE APPENDIX

- (i) Expert Declaration under 37 C.F.R. 1.132
- (ii) Assignment in U.S. Application No. 09/780,731, which is the parent application to the present application.

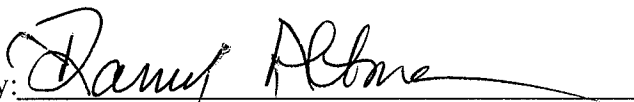
X. RELATED PROCEEDINGS APPENDIX

There are no related proceedings.

Conclusion

In view of the arguments presented above, Appellant submits that the present claims are not rendered obvious by any of the cited combinations of references, and respectfully request that the rejections be overturned.

Dated: September 30, 2009

By: 
Daniel E. Altman
Registration No. 34,115
Attorney of Record
Customer No. 20995
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Nemoto, Shigeru
Appl. No. : 10/692,090
Filed : October 23, 2003
For : SYRINGE BARREL WITH
ROUGHEND SURFACE
Examiner : DeSanto, Matthew F.
Group Art Unit : 3763

DECLARATION UNDER 37 C.F.R §1.132

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

1. This Declaration is being submitted to explain theoretically that the syringe barrel disclosed by Botich, USP 5,407,431, does not achieve the effect of the present invention.
2. I am an employee of Nemoto Kyorindo Co., Ltd., and am familiar with the specification and prosecution history.
3. I have extensive experience in the field of mechanical engineering for many years. My Curriculum Vitae is attached herewith as Appendix A.
4. Theoretically, static friction force (F) is expressed by the following equation (1).

$$F = \mu N \quad (1)$$

wherein, F denotes the maximum static friction force, μ denotes the coefficient of friction and N denotes the normal force to the contact surface. While the mechanism of friction force has not yet been fully solved, it is believed either engagement of concave-convex portion of the two surfaces or cohesive effect of the two surfaces.

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Filed : October 23, 2003

It is known that the coefficient of friction, and therefore the maximum static friction force, does not depend on the apparent contacting surface area. Even if the contacting surface area increases or decreases, the maximum static friction force stays the same value. On the other hand, if the contacting surface is roughened, the maximum static friction force (F) increases because the coefficient of friction (μ) increases. The increase of μ is accounted for either the engagement effect or cohesive effect.

In the syringe barrel disclosed by Botich, USP 5,407,431, the flange 79 has grooves 83 or knurling. The size of grooves or knurling are considered to be about 1 mm to 3 mm in width from FIG. 1. When the flange 79 is brought into contact with the flange insertion groove, the maximum static friction force is believed to be almost the same the value as observed for the flange having flat surface. This is because the grooves or knurling of about 1 to 3 mm size in width do not effect the change in the coefficient of friction (μ). Therefore, if the syringe barrel disclosed by Botich or that having similar structure is used with the injector having the cylinder holder with flange insertion groove, the same result will be obtained as those shown as comparative examples in Table 2 on page 28 of the present application.

5. In conclusion, the claimed invention possesses unexpected advantages and the result is not predictable from the cited references.

6. I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful, false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or patent issuing therefrom.

Dated: May 9, 2008

By: 矢澤 亜希夫
Akio YAZAWA

Appl. No. : 10/692,090
Filed : October 23, 2003

Appendix A

1. I was born on February 28, 1976. I graduated from the Department of Mechanical Engineering, College of Engineering of Kanto Gakuin University on March 31, 1999.

2. I had been employed by Nemoto Kyorindo Co., Ltd. since April 1, 1999 and working at the Kawaguchi Factory. I have worked in the field of designing of injector for 9 years.

Dated: May 9, 2008

By: 矢澤 亜希夫
Akio YAZAWA

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DEA/koA



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RECORDATION DATE: 02/09/2001

REEL/FRAME: 011544/0581
NUMBER OF PAGES: 5

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:
NEMOTO, SHIGERU

DOC DATE: 02/01/2001

ASSIGNEE:
NEMOTO KYORINDO CO., LTD.
2-27-20, HONGO, BUNKYO-KU
TOKYO, JAPAN

SERIAL NUMBER: 09780731
PATENT NUMBER:

FILING DATE: 02/09/2001
ISSUE DATE:

DOROTHY RILEY, PARALEGAL
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03-06-2001

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Attached original documents or copy thereof.

1. Name of conveying party(ies): (If multiple assignors, list numerically)

Shigeru Nemoto

Additional name(s) of conveying party(ies) attached?

() Yes (X) No

2. Name and address of receiving party(ies):

Name: NEMOTO KYORINDO CO., LTD.

Address: 2-27-20, Hongo, Bunkyo-ku, Tokyo, Japan

Additional name(s) of receiving party(ies) attached?

() Yes (X) No

3. Nature of conveyance:

- (X) Assignment
() Merger
() Security Agreement
() Change of Name
() Other:

Execution Date: (If multiple assignors, list execution dates in numerical order corresponding to numbers indicated in 1 above) February 1, 2001

4. Application number(s) or Patent number(s):

- (X) Application(s) filed herewith
Execution Date(s): February 1, 2001

- () Patent Application No.:
Filing Date:

- () Patent No.:
Issue Date:

Additional numbers attached? () Yes (X) No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Daniel E. Altman
KNOBBE, MARTENS, OLSON & BEAR, LLP
Customer No. 20,995
Internal Address: Sixteenth Floor
Street Address: 620 Newport Center Drive
City: Newport Beach State: CA ZIP: 92660
Attorney's Docket No.: WAKAB60.001AUS

7. Total fee (37 CFR 3.41): \$40.00

- (X) Enclosed
() Authorized to be charged to deposit account

8. Deposit account number: 11-1410

Please charge this account for any additional fees which may be required, or credit any overpayment to this account.

6. Total number of applications and patents involved: 1

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct, and any attached copy is a true copy of the original document.

Daniel E. Altman
Name of Person Signing

Daniel Altman
Signature

February 9, 2001
Date

34,115
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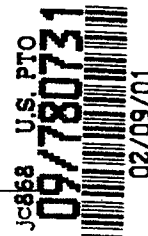
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ASSIGNMENTWHEREAS, I/WE (1) Shigeru NEMOTOa Japanese citizen, residing at c/o Nemoto Kyorindo Co., Ltd., 2-27-20,
Hongo, Bunkyo-ku, Tokyo, Japan

(2) _____

a _____ citizen, residing at _____

(3) _____

a _____ citizen, residing at _____

hereinafter referred to as Assignor (collectively if more than one inventor is listed above), have invented certain new
and useful improvements in SYRINGE BARREL AND CYLINDER HOLDER

the specification of which:

(a) ☒ is attached hereto; or(b) ☐ was filed on _____ as Application
No. _____ or Express Mail No., as Application No. not
yet known _____ and was amended
on _____ (if applicable); or(c) ☐ was described and claimed in PCT International Application No.

_____ filed on _____

and as amended under PCT Article 19 on _____

(if any) and/or under PCT Article 34 on _____ (if any).


AND WHEREAS, NEMOTO KYORINDO CO., LTD.with its principal place of business at 2-27-20, Hongo, Bunkyo-ku, Tokyo, Japan,
(hereinafter referred to as Assignee) desires to acquire the entire right, title, and interest in and to the said
improvements with respect to the United States of America, its territories and possessions.NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which is hereby
acknowledged, Assignor hereby acknowledges that it has sold, assigned, transferred and set over, and by these
presents does hereby sell, assign, transfer and set over, unto Assignee, its successors, legal representatives and
assigns, the entire right, title, and interest in the United States of America, and its territories and possessions in, to
and under said improvements, and any Patent Applications in the United States of America and all divisions,
renewals and continuations thereof, and all Patents of the United States of America which may be granted thereon
and all reissues and extensions thereof, and all rights of priority under International Conventions; and Assignor

hereby authorizes and requests the Commissioner of Patents of the United States of America to issue all Patents for said improvements to Assignee, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND ASSIGNOR HEREBY covenants and agrees that it will communicate to Assignee, its successors, legal representatives and assigns, any facts known to it respecting said improvements, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing and reissue applications, make all rightful oaths and generally do everything possible to aid Assignee, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for said improvements in the United States of America.

IN TESTIMONY WHEREOF, Assignor intending to be legally bound has hereunto affixed its signature.

This 1st day of February, 2001


Signature of Shigeru NEMOTO

This _____ day of _____, 20____

Signature of _____

This _____ day of _____, 20____

Signature of _____